SECTION II—CLAIMS

1. (Currently Amended) A mode scrambler, comprising:

an optical fiber adapter having a gap, a first end, and a second end, wherein a single mode optical fiber is coupled to the first end and a multimode optical fiber is coupled to the second end and wherein the single mode optical fiber and the multimode optical fiber are fixed relative to each other and the single mode optical fiber is substantially aligned with the multimode optical fiber; and

a diffuser disposed in the gap.

2. (Original) The mode scrambler of claim 1 wherein the diffuser comprises a piece of Scotch® tape.

3. (Original) The mode scrambler of claim 1 wherein the diffuser comprises a thin piece of glass.

4. (Original) The mode scrambler of claim 1 wherein the diffuser comprises a thin piece of plastic.

5. (Original) The mode scrambler of claim 1 wherein the diffuser comprises a thin piece of acetate.

6. (Original) The mode scrambler of claim 1 wherein the diffuser comprises a thin piece of acrylic.

7 (Original) The mode scrambler of claim 1 wherein the diffuser comprises particulate suspended in a material having a uniform index of refraction.

8. (Original) The mode scrambler of claim 1 wherein the diffuser comprises air.

9. (Currently Amended) A method to scramble an optical signal, comprising:

substantially aligning a single mode optical fiber and a multimode optical fiber using an optical fiber adapter having a single mode end and a multimode end;

fixing the single mode optical fiber and the multimode optical fiber in their substantially aligned positions;

disposing a diffuser between ~~mating ends~~ the single mode end and the multimode end of ~~an~~ the optical fiber adapter ~~having a single mode end and a multimode end~~;

launching a single mode signal in the single mode end; and

receiving a multimode optical signal in the multimode end.

10. (Original) The method of claim 9, further comprising disposing a piece of Scotch® tape between the mating ends of the optical fiber adapter.

11. (Original) The method of claim 9, further comprising disposing a thin piece of glass between mating ends of the optical fiber adapter.

12. (Original) The method of claim 9, further comprising disposing a thin piece of plastic between mating ends of the optical fiber adapter.

13. (Original) The method of claim 9, further comprising disposing a thin piece of acetate between mating ends of the optical fiber adapter.

14. (Original) The method of claim 9, further comprising disposing a thin piece of acrylic between mating ends of the optical fiber adapter.

15. (Original) The method of claim 9, further comprising disposing particulate suspended in a material having a uniform index of refraction between mating ends of the optical fiber adapter.

16. (Original) The method of claim 9, further comprising disposing air in the gap.